Panasonic

CD Stereo System

Operating Instructions

Model No. **SC-AK630**

Before connecting, operating or adjusting this product, please read the instructions completely.
Please keep this manual for future reference.

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COMPACT disc DIGITAL AUDIO

Note:
"EB" on the packaging indicates the United Kingdom.

Dear customer

Thank you for purchasing this product.
For optimum performance and safety, please read these instructions carefully.

These operating instructions are applicable to the following system.
Unless otherwise indicated, illustrations in these operating instructions are of SC-AK630 for Continental Europe.

System	SC-AK630
Main unit	SA-AK630
Front speakers	SB-AK630
Subwoofer	SB-WAK630

Safety precautions

Placement

Set the unit up on an even surface away from direct sunlight, high temperatures, high humidity, and excessive vibration. These conditions can damage the cabinet and other components, thereby shortening the unit's service life.
Do not place heavy items on the unit.

Voltage

Do not use high voltage power sources. This can overload the unit and cause a fire.
Do not use a DC power source. Check the source carefully when setting the unit up on a ship or other place where DC is used.

AC mains lead protection

Ensure the AC mains lead is connected correctly and not damaged. Poor connection and lead damage can cause fire or electric shock. Do not pull, bend, or place heavy items on the lead.
Grasp the plug firmly when unplugging the lead. Pulling the AC mains lead can cause electric shock.
Do not handle the plug with wet hands. This can cause electric shock.

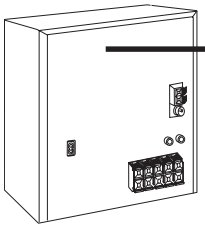
Foreign matter

Do not let metal objects fall inside the unit. This can cause electric shock or malfunction.
Do not let liquids get into the unit. This can cause electric shock or malfunction. If this occurs, immediately disconnect the unit from the power supply and contact your dealer.
Do not spray insecticides onto or into the unit. They contain flammable gases which can ignite if sprayed into the unit.

Service

Do not attempt to repair this unit by yourself. If sound is interrupted, indicators fail to light, smoke appears, or any other problem that is not covered in these instructions occurs, disconnect the AC mains lead and contact your dealer or an authorized service center. Electric shock or damage to the unit can occur if the unit is repaired, disassembled or reconstructed by unqualified persons.
Extend operating life by disconnecting the unit from the power source if it is not to be used for a long time.

(Back of product)



LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT

CAUTION	–	INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM. IEC60825-1 / Class 3b
VARNING	–	OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN.
ADVARSEL	–	USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
ADVARSEL	–	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VARO!		AVATTAESSA OLET NÄKYMÄTÖNTÄ ALTTIINA LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VORSICHT	–	UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
ATTENTION	–	RAYONNEMENT LASER INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
注意	–	打开时有不可见激光辐射，避免激光束照射。
注意	–	ここを開くと不可視レーザー光が出ます。ビームを見たり、触れたりしないで下さい。 RQLXS0058

Inside of product
Tuotteen sisällä
Produktets innside

Caution for AC Mains Lead

(For United Kingdom)
("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark ⓐ or the BSI mark ♡ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as stated below.
If in any doubt please consult a qualified electrician.

IMPORTANT
The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral, Brown: Live.
As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF–KEEP DRY.

Before use
Remove the connector cover.

How to replace the fuse
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

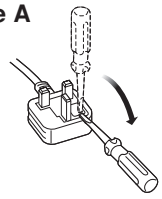
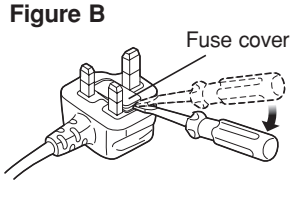


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

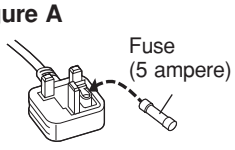
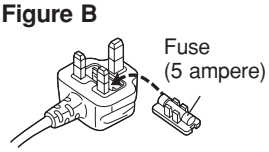


Figure B

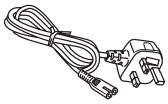


Supplied accessories

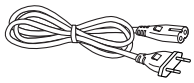
Please check and identify the supplied accessories.
Use numbers indicated in parentheses when asking for replacement parts. (As of December 2004)

☐ **AC mains lead ..... 1 pc.**

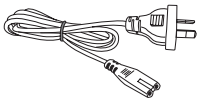
For the United Kingdom
(RJA0053-3X)



For Continental Europe and South Africa
(RJA0019-2X)



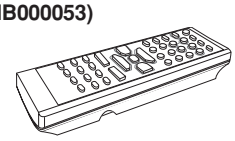
For Australia and N.Z.
(K2CJ2DA00008)



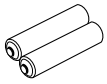
☐ **Remote control transmitter ..... 1 pc.**

For Europe
(N2QAHB000053)

For others
(N2QAHB000055)



☐ **Batteries for remote control ..... 2 pcs.**

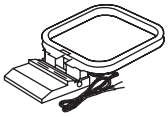


☐ **FM indoor antenna ..... 1 pc.**

For Europe
(RSA0007-L)

For others
(RSA0006-L)

☐ **AM loop antenna (N1DAAAA00001) .....1 pc.**



For the United Kingdom

☐ **Antenna plug adaptor (SJP9009) ..... 1 pc.**

For the United Kingdom and Republic of Ireland

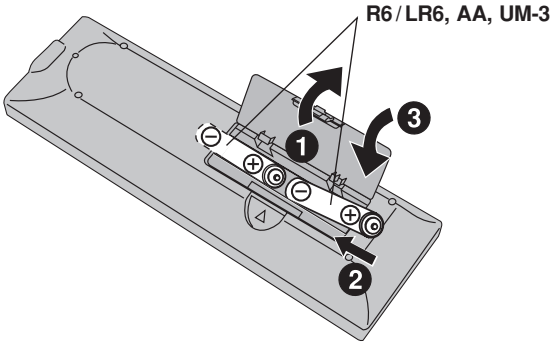
Sales and Support Information

Customer Care Centre
- For UK customers: 08705 357357
- For Republic of Ireland customers: 01 289 8333
- Visit our website for product information
- E-mail: customer.care@panasonic.co.uk

Direct Sales at Panasonic UK
- Order accessory and consumable items for your product with ease and confidence by phoning our Customer Care Centre Monday-Friday 9:00am-5:30pm. (Excluding public holidays).
- Or go on line through our Internet Accessory ordering application at www.panasonic.co.uk.
- Most major credit and debit cards accepted.
- All enquiries transactions and distribution facilities are provided directly by Panasonic UK Ltd.
- It couldn't be simpler!
- Also available through our Internet is direct shopping for a wide range of finished products, take a browse on our website for further details.

The remote control

Batteries



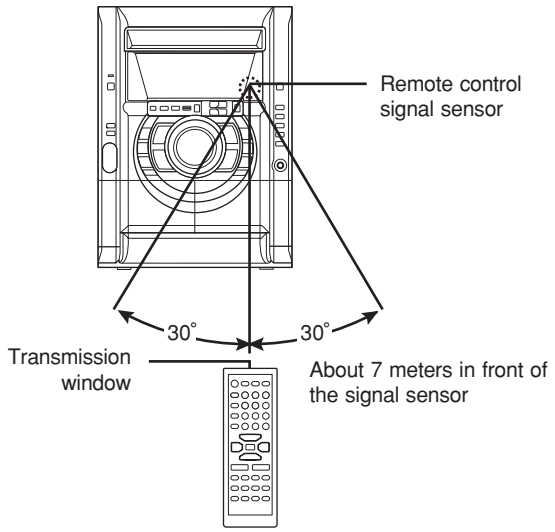
- Insert so the poles (+ and –) match those in the remote control.
- Do not use rechargeable type batteries.

Do not:
- mix old and new batteries.
- use different types at the same time.
- heat or expose to flame.
- take apart or short-circuit.
- attempt to recharge alkaline or manganese batteries.
- use batteries if the covering has been peeled off.
- keep together with metallic objects such as necklaces.

Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts and may cause a fire.
If electrolyte leaks from the batteries, consult your dealer.
Wash thoroughly with water if electrolyte comes in contact with any part of your body.

Remove if the remote control is not going to be used for a long period of time. Store in a cool, dark place.
Replace if the unit does not respond to the remote control even when held close to the front panel.

Use



Aim at the sensor, avoiding obstacles, at a maximum range of 7 meters directly in front of the unit.
- Keep the transmission window and the unit's sensor free from dust.
- Operation can be affected by strong light sources, such as direct sunlight, and the glass doors on cabinets.

Do not:
- put heavy objects on the remote control.
- take the remote control apart.
- spill liquids onto the remote control.

Set-up

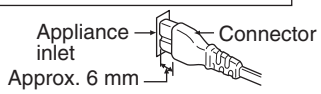
Connect the AC mains lead only after all other connections have been made.
Optional antenna connections (➡ page 11).

Preparation
Twist and pull off the vinyl tip of the antenna wire (for South Africa, Australia and N.Z.) and speaker cords.

4 AC mains lead

FOR THE UNITED KINGDOM ONLY
READ THE CAUTION FOR THE AC MAINS LEAD ON PAGE 2 BEFORE CONNECTION.

Insertion of connector
Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing. However there is no problem using the unit.



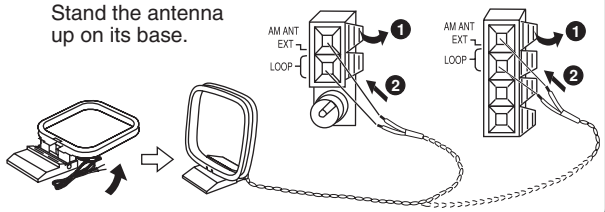
Note
The included AC mains lead is for use with this unit only.
Do not use it with other equipment.

For your reference
To save power when the unit is not going to be used for a long time, unplug it from the household mains socket. You will need to reset some memory items after plugging in the unit.

2 AM loop antenna

Stand the antenna up on its base.

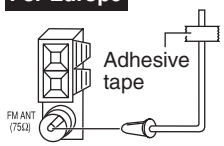
For Europe **For others**



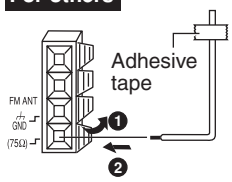
1 FM indoor antenna

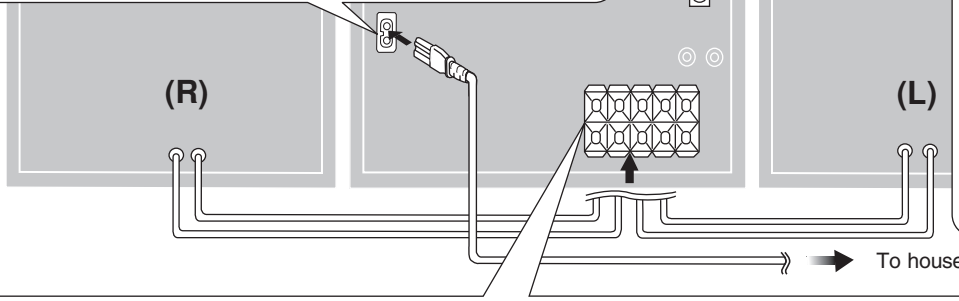
Tape the antenna where reception is best.

For Europe



For others

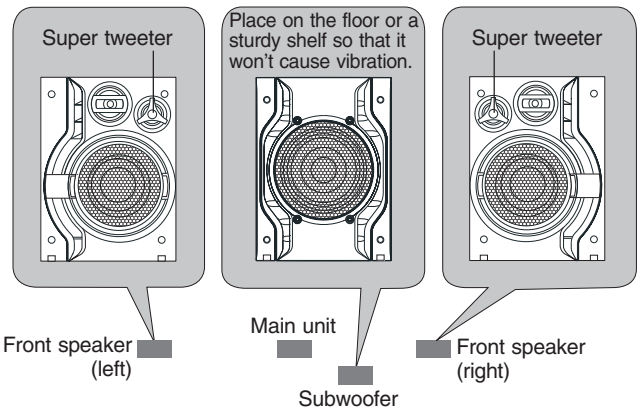




To household mains socket

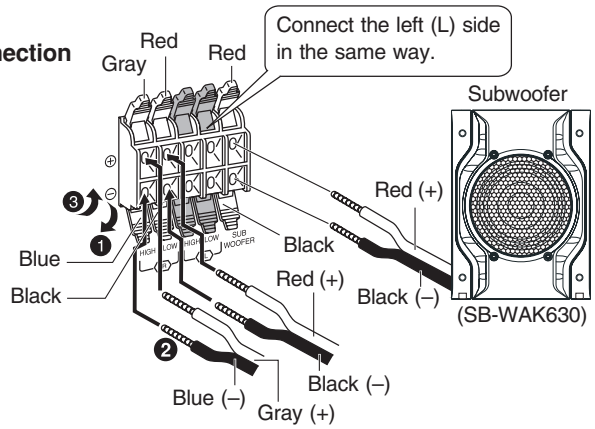
3 Speakers

Placement
Place the front speakers so that the super tweeter is on the inside.



Note
- Keep your speakers at least 10 mm away from the system for proper ventilation.
- These speakers do not have magnetic shielding. Do not place them near televisions, personal computers or other devices easily influenced by magnetism.
- You cannot take the front net off the speakers.

Connection

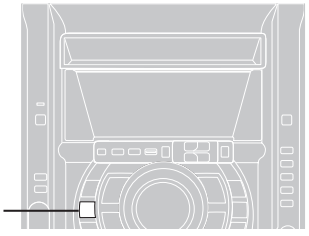


Use only the supplied speakers.
The combination of the main unit and speakers provide the best sound. Using other speakers can damage the unit and sound quality will be negatively affected.

Notes on speaker use
- You can damage your speakers and shorten their useful life if you play sound at high levels over extended periods.
- Reduce the volume in the following cases to avoid damage.
  – When playing distorted sound.
  – When adjusting the sound quality.

Caution
- **Use the speakers only with the recommended system. Failure to do so may lead to damage to the amplifier and/or the speakers, and may result in the risk of fire. Consult a qualified service person if damage has occurred or if you experience a sudden change in performance.**
- **Do not attach these speakers to walls or ceilings.**

Turning the demo function on/off



When the unit is first plugged in, a demonstration of its functions may be shown on the display.
If the demo setting is off, you can show a demonstration by selecting "DEMO ON".

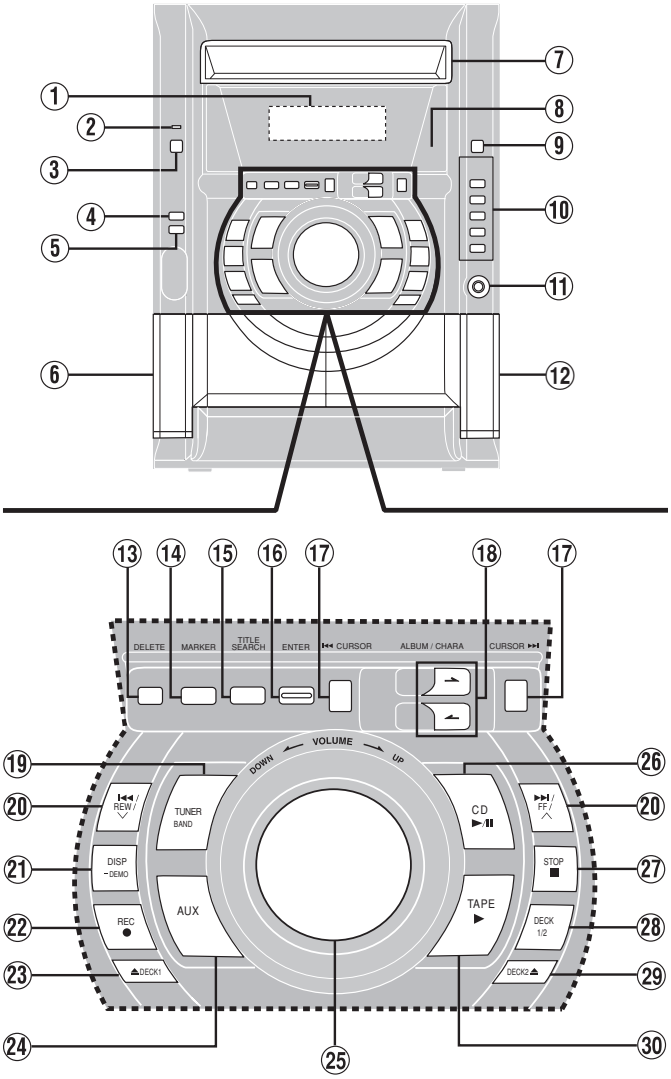
Press and hold [DISP, –DEMO].
The display changes each time the button is held down.
NO DEMO (off) ⟷ DEMO ON (on)

While in the standby mode, select "NO DEMO" to reduce power consumption.

Note
DEMO function cannot be turned on when Dimmer is on.

Front panel controls

Main unit

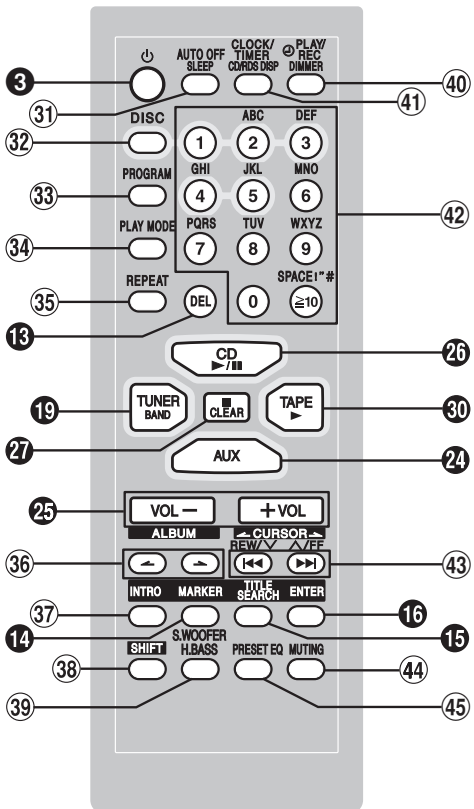


① **Display**
② **AC supply indicator [AC IN]**
This indicator lights when the unit is connected to the AC mains supply.
③ **Standby/on switch [⏻/I]**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
④ **H.BASS button [H.BASS]** **13**
⑤ **Subwoofer button [SUBWOOFER]** **13**
⑥ **Deck 1 cassette holder** **11**
⑦ **Disc tray**
⑧ **Remote control signal sensor** **3**
⑨ **CD tray open/close button [⏏, OPEN/CLOSE]** **6**
⑩ **CD direct play buttons [1 – 5]** **6**
⑪ **Headphone jack [PHONES]** **13**
⑫ **Deck 2 cassette holder** **11**

Center console

⑬ **Delete button [DELETE]** **8, 9**
⑭ **Marker memory/recall button [MARKER]** **8**
⑮ **Title search mode select button [TITLE SEARCH]** **9**
⑯ **Enter button [ENTER]** **8, 9**
⑰ **Cursor buttons [I◀◀ CURSOR, CURSOR ▶▶I]** **9**
⑱ **Album skip, character buttons [▁◢, ALBUM/CHARA, ◢▁, ALBUM/CHARA]** **7, 9**
⑲ **Tuner/band select button [TUNER, BAND]** **10**
⑳ **CD skip/search, tape fast-forward/rewind, tune/preset channel select, time adjust buttons [I◀◀/REW/∨, ▶▶I/FF/∧]** **6, 9-11**
㉑ **Display, demonstration button [DISP, –DEMO]** **4, 13**
㉒ **Record button [●, REC]** **11**
㉓ **Deck 1 open button [⏏ DECK1]** **11**
㉔ **AUX button [AUX]** **13**
㉕ **Volume control [VOLUME DOWN, UP]** **13**
㉖ **CD play/pause button [▶/ II, CD]** **6**
㉗ **Stop/program clear button [■, STOP]** **6, 8, 9, 11**
㉘ **Deck select button [DECK 1/2]** **11**
㉙ **Deck 2 open button [DECK2 ⏏]** **11**
㉚ **Tape play button [▶, TAPE]** **11**

Remote control



Buttons such as ❸ function in exactly the same way as the buttons on the main unit.

㉛ **Sleep timer + Auto off button [SLEEP, AUTO OFF]** **12, 13**
㉜ **Disc button [DISC]** **7**
㉝ **Program button [PROGRAM]** **8, 10**
㉞ **Play mode select button [PLAY MODE]** **7, 10, 11**
Use this for selecting CD play mode, tune mode, FM mode and deck select.
㉟ **Repeat button [REPEAT]** **8**
㊱ **Album skip buttons [◢ , ▁◢ , ALBUM]** **7**
㊲ **Intro button [INTRO]** **9**
㊳ **Shift button [SHIFT]**
To use functions labeled in orange ※:
While pressing [SHIFT], press the corresponding button.
※ For buttons [AUTO OFF], [CLOCK/TIMER], [◴PLAY/REC] and [S.WOOFER]
㊴ **H.BASS + Subwoofer button [H.BASS, S.WOOFER]** **13**
㊵ **Dimmer + Play timer/record timer button [DIMMER, ◴PLAY/REC]** **12, 13**
㊶ **For Europe**
CD display/RDS display + Clock/timer button [CD/RDS DISP, CLOCK/TIMER] **7, 10, 12**
For others
CD display + Clock/timer button [CD DISP, CLOCK/TIMER] **7, 12**
㊷ **Numbered, character buttons [≧10, 1–9, 0, A–Z, SPACE!"#]** **7-10**
㊸ **CD skip/search, tape fast-forward/rewind, tune/preset channel select, time adjust, cursor buttons [I◀◀, REW/∨, ◢ CURSOR, ▶▶I, ∧/FF, CURSOR ▁◣]** **8-12**
㊹ **Muting button [MUTING]** **13**
㊺ **Preset EQ select button [PRESET EQ]** **13**

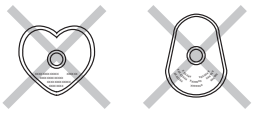
Disc information

Disc selection

This unit can play MP3 and CD-DA (digital audio) format audio CD-R and CD-RW that have been finalized (a process that enables CD-R/CD-RW players to play audio CD-R and CD-RW) upon completion of recording.
It may not be able to play some CD-R or CD-RW due to the condition of the recording.

Disc type	Logo	Indication used in instructions
Audio CD	COMPACT disc DIGITAL AUDIO	CD
CD-R/RW	–	CD MP3 (Depending on the recording format ➡ see above)

Do not:
- use irregularly shaped discs.
- attach extra labels and stickers.
- use discs with labels and stickers that are coming off or with adhesive exuding from under labels and stickers.



- attach scratch proof covers or any other kind of accessory.
- write anything on the disc.
- clean discs with liquids. (Wipe with a soft, dry cloth.)
- use discs printed with label printers available on the market.

To prevent damage

Always observe the following points:
- Load only 1 disc on the tray.
- Always stop the changer before loading or changing discs. Do not change discs while a disc is playing.
- Set the system on a flat, level surface.
- Always unload all discs before moving the unit.

Do not:
- set the unit on top of magazines, inclined surfaces, etc.
- move the unit while a tray is opening/closing, or when loaded.
- put anything except a disc in the tray.
- use cleaning discs or discs which are badly warped or cracked.
- disconnect the AC mains lead from the household mains socket during disc changing operation.

MP3 information

This unit can play MP3 files recorded on CD-R/RW with a computer.
Files are treated as tracks and folders are treated as albums.
This unit can access up to 999 tracks, 255 albums and 20 sessions.

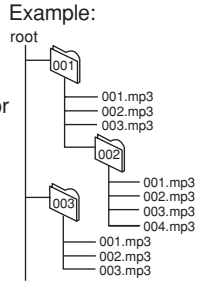
When making MP3 files to play on this unit

Disc format
Discs must conform to ISO9660 level 1 or 2 (except for extended formats).

File format
MP3 files must have the extension ".MP3" or ".mp3".

To play in a certain order
Prefix the folder and file names with 3-digit numbers in the order you want to play them. Files may not be recorded in numbered order if the prefixes have different numbers of digits. For example: 1track.mp3, 2track.mp3, 10track.mp3. However, some writing software may also cause recording to occur in a different order.

Example:



MPEG Layer-3 audio decoding technology licensed from Fraunhofer IIS and Thomson multimedia.

Limitations on MP3 play

- This unit is not compatible with packet-write format.
- When both MP3 and CD-DA data is recorded on the disc over a number of sessions:
  - If the first session contains MP3 recordings, the unit will play from the MP3 made in that session till the session before the first CD-DA recordings.
  - If the first session contains CD-DA recordings, the unit will play only the recordings made in that session. The subsequent sessions will be ignored.
- Some MP3 may not be played due to the condition of the disc or recording.
- Recordings will not necessarily be played in the order you recorded them.

Discs

Basic play

CD MP3

Pause

Press [▶/II, CD] during play.
Press again to resume play.

[▶/II, CD]

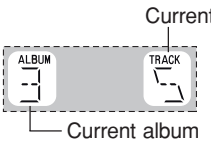
1 Press [⏏, OPEN/CLOSE] to open the tray.
The unit comes on.
Load discs with label facing up.
To load discs in other trays, press [1]–[5] to select the tray, then press [⏏, OPEN/CLOSE].

2 Press [⏏, OPEN/CLOSE] to close the tray.

Current disc indicator

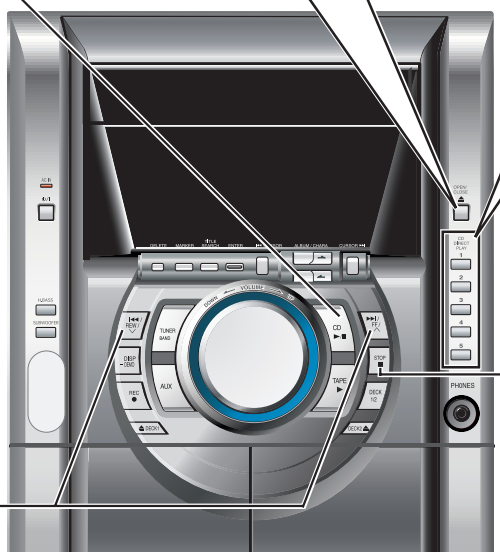
Skip/Search

Press [I◀◀/REW/∨] or [▶▶I/FF/∧] to skip.
MP3 Display when skipping in stop mode (example):



- During random play (➡ page 7), you cannot skip to tracks already played.

CD **Hold down during play or pause to search.**
- During program play (➡ page 8), or random play (➡ page 7), you can search only within the track.

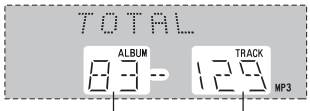


3 Press [1]–[5] to play the disc.
You can also press [▶/II, CD] if the current disc is your desired disc.

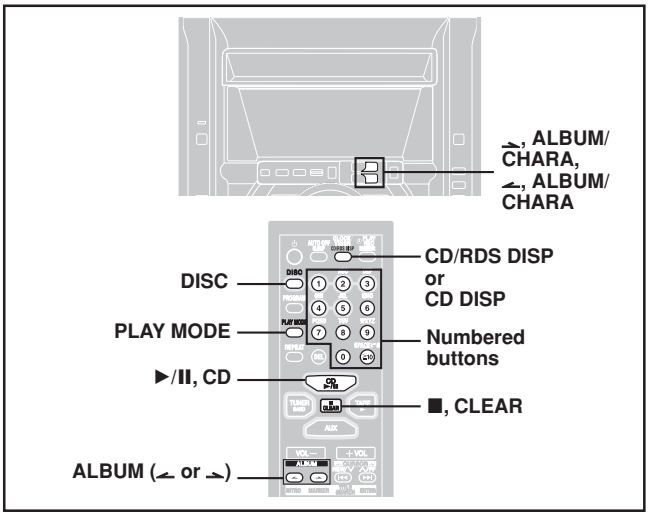
[1]–[5]

Stop

Press [■, STOP] during play.
MP3 Display when in the stop mode (example):
"MP3": Indicates the disc contains MP3 files



Total number of albums
Total number of tracks



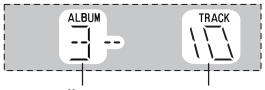
Album skip play MP3

During play or stop

Press [, ALBUM/CHARA] or [, ALBUM/CHARA] to select the desired album.

Remote control: Press [ALBUM (or)].

When selecting in the stop mode (example):



Current album Number of tracks in current album

CD display CD MP3

Remote control only

You can select a desired CD display mode.

For Europe

Press [CD/RDS DISP] during play or pause.

For others

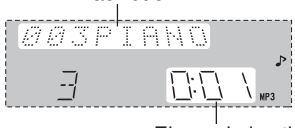
Press [CD DISP] during play or pause.

Every time you press the button:

CD Remaining play time ↔ Elapsed play time

MP3 → ⓐ Remaining play time, Original display
↓
ⓑ Elapsed play time, Album title
↓
ⓒ Elapsed play time, Track title
↓
ⓓ Elapsed play time, ID3 album name
↓
ⓔ Elapsed play time, ID3 title name
↓
ⓕ Elapsed play time, ID3 artist name
↓
ⓖ Elapsed play time, Original display

Example: ⓒ Track title



Elapsed play time

Note

CD

- When track number 25 or greater is playing, remaining play time display shows "– –:– –".

MP3

- When a title is longer than 9 characters, it will scroll across the display. If you selected a mode from ⓑ - ⓕ (see above), the scrolling will start again after every 3 seconds.
- "NO ID3" is displayed if titles with ID3 tags haven't been entered.
- Maximum number of displayable characters:
  Album/track title: 31
  ID3 album/title/artist name: 30
  (ID3 is a tag embedded in MP3 track to provide information about the track.)
- This unit can display album and track titles with ID3 tags (version 1.0 and 1.1). Titles containing text data that the unit doesn't support cannot be displayed.
- Titles entered with 2-byte code cannot be displayed correctly on this unit.

To listen to specific discs and tracks (Play Mode function) CD MP3

ⓐ ALL-DISC: Plays **all** loaded **discs** in succession from the selected disc to the final disc ※.
ⓑ 1-SONG: Plays **one** selected **track** on the selected disc.
ⓒ 1-ALBUM: MP3 Plays **one** selected **album** on the selected disc.
ⓓ 1-DISC RANDOM: Plays **one** selected **disc** in **random** order.
ⓔ ALL-DISC RANDOM: CD Plays **all** loaded **discs** in **random** order.
ⓕ 1-DISC: Plays **one** selected **disc.**
ⓖ 1-ALBUM RANDOM: MP3 Plays **one** selected **album** in **random** order.

Remote control only

Preparation: Press [▶/II, CD] and then [■, CLEAR].

Press [PLAY MODE] to select the desired mode.

Every time you press the button:

CD

ⓐ ALL-DISC → ⓑ 1-SONG → ⓓ 1-DISC RANDOM
↑ ← ⓕ 1-DISC ← ⓔ ALL-DISC RANDOM ←

MP3

ⓐ ALL-DISC → ⓑ 1-SONG → ⓒ 1-ALBUM → ⓓ 1-DISC RANDOM
↑ ← ⓕ 1-DISC ← ⓖ 1-ALBUM RANDOM ←

ALL-DISC RANDOM CD

Press [▶/II, CD] to start play.

ALL-DISC/1-DISC/1-DISC RANDOM CD MP3

Press [DISC] and then [1]–[5] to select the disc.

Play starts.

1-ALBUM/1-ALBUM RANDOM MP3

1 Press [DISC] and then [1]–[5] to select the disc.

2 Press [ALBUM (or)] to select the album.

Play starts from the selected album.

1-SONG

CD

1 Press [DISC] and then [1]–[5] to select the disc.

2 Press the numbered buttons to select the track in the current disc.

To select a 2-digit track, press [≧10] once then the two digits.
Play starts from the selected track.

MP3

1 Press [DISC] and then [1]–[5] to select the disc.

2 Press [ALBUM (or)] to select the album.

3 Press the numbered buttons to select the track in the current album.

To select a 2-digit track, press [≧10] once then the two digits.
To select a 3-digit track, press [≧10] twice then the three digits.
Play starts from the selected track.

To stop play

Press [■, CLEAR].

When playback ends

The current play mode will be retained in memory until it is changed even if the unit is turned off.

※ **Final disc**

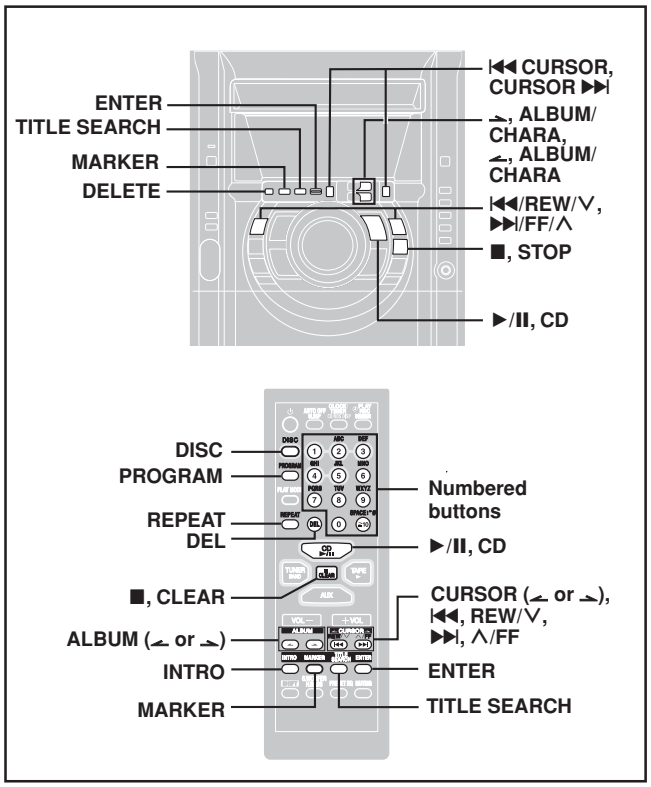
For example, if play starts from disc 4, disc 3 will be the "final disc".
Order of progression: Disc 4→5→1→2→3

■ MP3 **When "NOT MP3/ERROR1" appears on the display**

An unsupported MP3 format is being played. The unit will skip that track and play the next one.

Note

- You cannot use program mode together with Play Mode function.
- MP3 During 1-ALBUM mode, track skipping can only be done within the current album.



Program play

CD MP3

You can program up to 24 tracks.

Remote control only

CD

Preparation: Press [▶/II, CD] and then [■, CLEAR].

1 Press [PROGRAM].
"PGM" appears.

2 Press [DISC] and then [1]–[5] to select the disc.

3 Select the tracks with the numbered buttons.
To select a 2-digit track, press [≧10] once then the two digits.
Repeat steps 2 and 3 to program other tracks.

4 Press [▶/II, CD] to start play.

MP3

Preparation:
1. Press [DISC] and then [1]–[5] to select the disc.
2. Press [■, CLEAR].

1 Press [PROGRAM].
"PGM" appears.

2 Press [ALBUM (or)] to select the album.
To select an album directly, press the numbered buttons after pressing [ALBUM (or)].
To select a 2-digit album, press [≧10] once then the two digits.
To select a 3-digit album, press [≧10] twice then the three digits.

3 Press [|◀◀, REW/∨] or [▶▶|, ∧/FF] to select the track.
To select a track directly, press the numbered buttons after pressing [|◀◀, REW/∨] or [▶▶|, ∧/FF].
To select a 2-digit track, press [≧10] once then the two digits.
To select a 3-digit track, press [≧10] twice then the three digits.

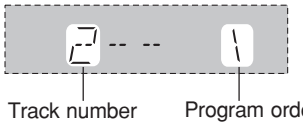
4 Press [ENTER].
Repeat steps 2 ~ 4 to program other tracks.

5 Press [▶/II, CD] to start play.

To exit program mode
Press [PROGRAM] in the stop mode. (You can replay your program by pressing [PROGRAM] then [▶/II, CD].)

You can do the following while "P" is displayed

- **To check program contents**
  Press [|◀◀, REW/∨] or [▶▶|, ∧/FF].
  Every time you press the button:
  CD The track number and program order are displayed:



  MP3 Program order is displayed, then album number and track number.
- **To add to the program**
  CD Do steps 2 and 3.
  MP3 Do steps 2 ~ 4.
- **To clear the last track**
  Press [DEL].
- **To clear all tracks**
  Press [■, CLEAR].
  While "CLEAR ALL" is blinking, press the button again to clear all tracks.

Note
- You cannot program CD-DA together with MP3 tracks.
- MP3 The program memory is cleared when you change a disc or open the disc tray.
- MP3 You cannot program more than one disc for MP3.

Repeat play

CD MP3

Remote control only

Press [REPEAT] during play.
"↻" is displayed.

To cancel repeat play
Press [REPEAT] to clear "↻" .

Note
You can use repeat mode with program play (➡ see left) and Play Mode (➡ page 7) functions.

Marking a track

CD MP3

You can mark one track each on the discs loaded so that you can start play from them later.

To mark a track

1 During play or stop
Select your desired track.
(➡ page 6, "Basic play – Skip/Search")

2 Hold down [MARKER] until "STORING" blinks on the display.
The selected track is stored in the marker of the current disc.

Note
If a track is already stored in the marker, it will be replaced next time you store a new track in the same marker.

To recall a marked track number in the current disc

During play or stop
Press [MARKER] to recall a marker.
Play starts from the track recalled.

Note
- "NO MARKER" indicates that the marker in the current disc is empty.
- The marker memory is cleared when you open the disc tray.
- You cannot use this function during program play or random play.

INTRO function (Album scan) MP3

You can find an album by listening to the first track of all albums in the current disc for 10 seconds each.

Remote control only

Preparation: Press [▶/II, CD] and then [■, CLEAR].

1 Press [INTRO].
INTRO function starts.
(INTRO function is cancelled after playing the first track in the last album on the current disc.)

2 While your desired album is playing, press [▶/II, CD].
Play continues from the first track of the album.

To stop during the process, press [INTRO] or [■, CLEAR].

Note

You cannot use this function during program play or random play.

Title search function MP3

You can search for your desired album/track with its keyword (part of the title).

Album/track title search

Preparation: Press [▶/II, CD] and then [■, STOP].

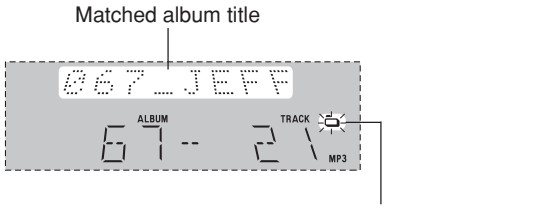
1 For album title search
Press [TITLE SEARCH] once.
For track title search
Press [TITLE SEARCH] twice.

2 Enter the characters of the keyword for the title.
(➡ see right: "Entering characters")

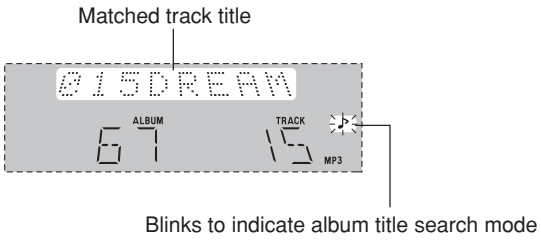
3 Press [ENTER].
Title search starts.

The matched title is displayed.

Album title search



Track title search



To show the next/previous search result
Press [▶▶I/FF/Λ] (next) or [I◀◀/REW/V] (previous).

Press [▶/II, CD] to start play from the album/track found.
For album search, play starts from the first track of the album.
(Search mode is cancelled.)

To cancel partway through
Press [■, STOP].

When there is no match for the searched keyword, the display shows "NOT FOUND".

Note

You cannot use title search function in program play or random play.

Entering characters

You can enter a keyword of up to 9 characters for album/track title search. You can only enter upper case letters but the unit also searches for lower case.

On the main unit

① Press [⌒, ALBUM/CHARA] or [⌒, ALBUM/CHARA] to select the required character.
Each time you press [⌒, ALBUM/CHARA], the characters change in the following order.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
1 2 3 4 5 6 7 8 9 0
space ! " # $ % & ' ( ) * + , − . / : ; < = > ? _ `

The sequence is reversed if you press [⌒, ALBUM/CHARA].

If you hold down [⌒, ALBUM/CHARA] or [⌒, ALBUM/CHARA], the characters change faster.

② Press [CURSOR ▶▶I] to enter the character.
Repeat steps ①~② to complete the keyword.

On the remote control

① Press the numbered button to select the required character.
Characters allocated to the numbered buttons:

Numbered buttons	Characters	Numbered buttons	Characters
1	1	6	M N O 6
2	A B C 2	7	P Q R S 7
3	D E F 3	8	T U V 8
4	G H I 4	9	W X Y Z 9
5	J K L 5	0	0
≧10	*space* !"#$ %&'()*+,− ./:;<=>?_ `		

The characters change each time a numbered button is pressed.
For example, every time you press [2]:
A → B → C → 2

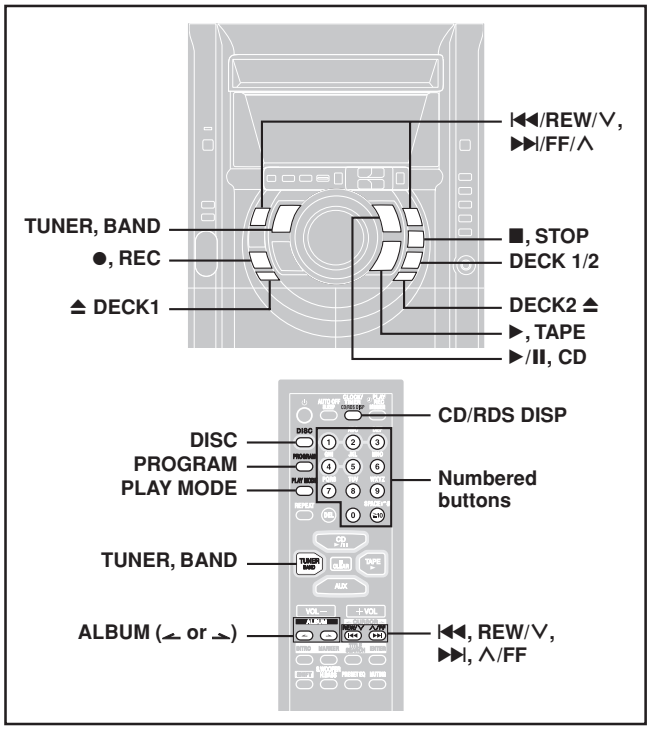
② Press [CURSOR ⌒] to enter the character.
Repeat steps ①~② to complete the keyword.

■ **Editing keywords**

To move the cursor
Press [I◀◀ CURSOR] or [CURSOR ▶▶I].
Remote control: Press [CURSOR (⌒ or ⌒)].

Deleting a character
1. Move the cursor over the character to be deleted.
2. Press [DELETE] (remote control: Press [DEL]).

Editing a character
1. Move the cursor over the character to be edited.
2. Enter the correct character.



Radio

Manual tuning

1 Press [TUNER, BAND] to select band.
The unit comes on.
Every time you press the button: FM ↔ AM

2 Press [PLAY MODE] on the remote control to select "MANUAL".
Every time you press the button: MANUAL ↔ PRESET

3 Hold down [I◀◀/REW/∨] or [▶▶I/FF/∧] for a moment to search for a station.
The frequency stops when it finds a clear station.
To stop during the process, press [I◀◀/REW/∨] or [▶▶I/FF/∧].
Under excessive interference, a station may not be found.
Press [I◀◀/REW/∨] or [▶▶I/FF/∧] repeatedly to tune step-by-step.

"TUNED" is displayed when a radio station is tuned.
"ST" is displayed when a stereo FM broadcast is being received.

If noise is excessive in FM

Remote control only

Hold down [PLAY MODE] to display "MONO".

Monaural sound is selected and noise reduces when reception is weak.
Hold down [PLAY MODE] again to cancel the mode.
"MONO" is also cancelled if the frequency is changed.

For Europe

RDS broadcasting

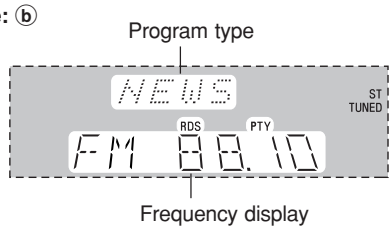
Remote control only

This unit can display the text data transmitted by the radio data system (RDS) available in some areas.
If the station you are listening to is transmitting RDS signals, "RDS" will light up on the display.

Press [CD/RDS DISP].
Every time you press the button:

ⓐ Frequency display, Station name (PS) ↔ ⓑ Frequency display, Program type (PTY)

Example: ⓑ



Radio

Program type displays			
NEWS	VARIED	FINANCE	COUNTRY
AFFAIRS	POP M	CHILDREN	NATIONAL
INFO	ROCK M	SOCIAL A	OLDIES
SPORT	M-O-R- M*	RELIGION	FOLK M
EDUCATE	LIGHT M	PHONE IN	DOCUMENT
DRAMA	CLASSICS	TRAVEL	TEST
CULTURE	OTHER M	LEISURE	ALARM
SCIENCE	WEATHER	JAZZ	

* "M-O-R- M"="Middle of the road music"

For South Africa

AM allocation setting

Main unit only

By adjusting the allocation, you can enable this tuner to receive AM broadcasts allocated in 10 kHz steps.

Press and hold [TUNER, BAND]. After a few seconds, the display will change to a flashing display of the current minimum AM frequency. If you continue to hold the button down, the minimum frequency will change. Release the button at this time.

To return to the original frequency indication, repeat above.

Note

- RDS displays may not be available if reception is poor.
- After changing the "allocation" setting, the frequencies you previously preset in the memory will be cleared.
- Sound is momentarily interrupted if you load/unload tapes while listening to an AM broadcast.

Preset tuning

Remote control only

There are two methods of pre-setting stations.
Automatic presetting : All the stations the tuner can receive are preset.
Manual presetting : You can select the stations to preset and the order they are preset in.
Up to 15 stations each can be set in the FM and AM bands.

Preparation:
Press [TUNER, BAND] to select "FM" or "AM".

Automatic presetting

Do the following once each for FM and AM.
Preparation: Tune to the frequency where pre-setting is to begin.
Hold down [PROGRAM] until the frequency changes.

The tuner presets all the stations it can receive into the channels in ascending order. When finished, the last station memorized is tuned in.

Manual presetting

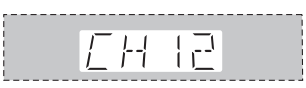
Pre-set the stations one at a time.

① **Press [PROGRAM] then press [I◀◀, REW/∨] or [▶▶I, ∧/FF] to tune to the desired station.**
② **Press [PROGRAM] then press [I◀◀, REW/∨] or [▶▶I, ∧/FF] to select a channel.**
③ **Press [PROGRAM].**

The station occupying a channel is erased if another station is preset in that channel.

Selecting channels

Press the numbered buttons to select the channel.
To enter a 2-digit channel, press [≧10], then the two digits.



OR

① **Press [PLAY MODE] to select "PRESET".**
② **Press [I◀◀, REW/∨] or [▶▶I, ∧/FF] to select the channel.**

Optional antenna connections

Use outdoor antenna if radio reception is poor.

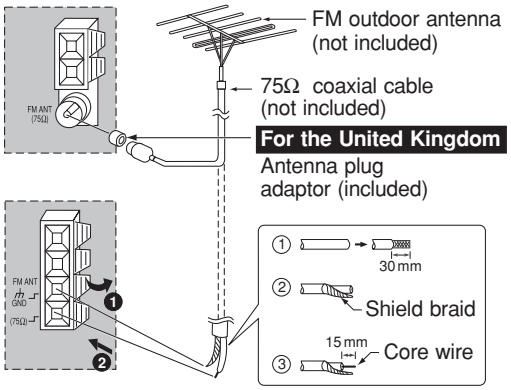
Note

Disconnect the outdoor antenna when the unit is not in use. Do not use the outdoor antenna during a lightning storm.

FM outdoor antenna

For Europe

Rear panel of this unit

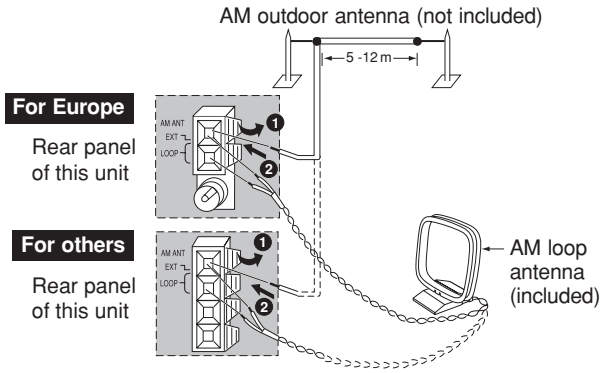


For others

Rear panel of this unit

- Disconnect the FM indoor antenna.
- The antenna should be installed by a competent technician.

AM outdoor antenna



Run a piece of vinyl wire horizontally across a window or other convenient location.
Leave the loop antenna connected.

Cassettes

Playback

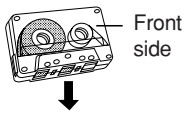
You can use either deck 1 or deck 2 for tape playback.

Use normal position tapes.
High position and metal position tapes can be played, but the unit will not be able to do full justice to the characteristics of these tapes.

> Your attention is drawn to the fact that recording pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

1 Press [▶, TAPE].
The unit comes on.
If a cassette was loaded, play starts automatically (One touch play).

2 Press [⏏ DECK1] or [DECK2 ⏏] and insert the cassette.
Insert with the side to be played facing towards you and the exposed tape facing down. Close the holder by hand.



3 Press [▶, TAPE] to start playback.
To play on the other side of the tape, turn the tape over and press [▶, TAPE].

To stop tape playback
Press [■, STOP].

To fast-forward or rewind
Press [I◀◀/REW/∨] (rewind) or [▶▶I/FF/∧] (fast-forward).

To select between loaded decks
Press [DECK 1/2] (remote control: [PLAY MODE]).

Note

- Tape playback is momentarily interrupted if you open the other deck.
- Tapes exceeding 100 minutes are thin and can break or get caught in the mechanism.
- Tape slack can get caught up in the mechanism and should be taken up before the tape is played.
- Endless tapes can get caught up in the deck's moving parts if used incorrectly.

Recording

Selection of tapes for recording
Use normal position tapes.
High position and metal position tapes can be used, but this unit will not be able to record or erase them correctly.

Preparation:
Wind up the leader tape so recording can begin immediately.

1 Press [DECK2 ⏏] and insert the cassette to be recorded.
Insert with the side to be recorded facing towards you and the exposed tape facing down.

2 Select the source to be recorded.

Radio recording:
Tune in the station. (➡ page 10)

Disc recording:
① Insert the disc(s) you want to record.
Press [▶/II, CD] and then [■, STOP].
② Prepare the desired disc recording mode.
Remote control only
- To record programmed tracks
On page 8, "Program play", do steps:
CD 1 ~ 3
MP3 1 ~ 4
- To record specific discs/tracks
1. Press [PLAY MODE] to select the desired mode. (➡ page 7)
2. Press [DISC] and then [1]–[5] to select the disc. Ensure disc is stopped.
3. MP3 For 1-ALBUM mode and 1-SONG mode: Press [ALBUM (⌢ or ⌢)] to select the album.
4. For 1-SONG mode: Press [I◀◀, REW/∨] or [▶▶I, ∧/FF] to select the track.

Tape-to-tape recording:
① Press [▶, TAPE] and then [■, STOP].
② Press [⏏ DECK1] and insert the cassette you want to record.

3 Press [●, REC] to start recording.

To stop recording
Press [■, STOP].

If the tape finishes before the disc
The disc continues playing. Press [■, STOP] to stop it.

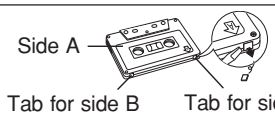
To record on the other side of the tape
Turn the tape over and press [●, REC].

Note

- Changes to volume and sound/field quality do not affect recording.
- You cannot open deck 1 while recording.
- You cannot fast-forward or rewind one deck while recording with the other.
- When recording an AM broadcast, sound is momentarily interrupted when you start and stop the recording.

Erasure prevention

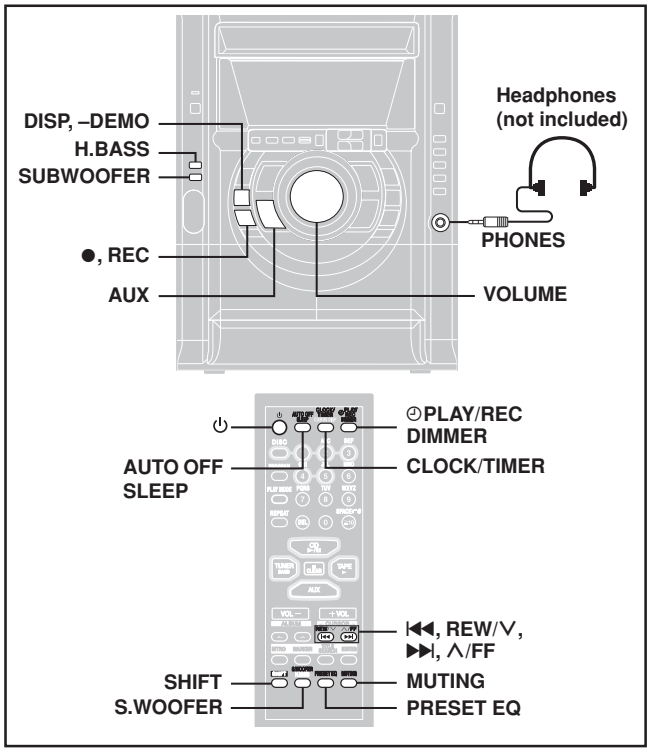
Use a screwdriver or similar object to break out the tab.



To re-record on a protected cassette

Cover the hole with adhesive tape.

To erase a tape
1. Press [▶, TAPE] and then [■, STOP].
2. Insert the recorded tape into deck 2. Ensure there is no tape in deck 1.
3. Press [●, REC].



Setting the time

Remote control only

This is a 24-hour clock.

1 Switch on the power.

2 Press [SHIFT] + [CLOCK/TIMER] to select "CLOCK".

Every time you press the button:

CLOCK → ◴PLAY → ◴REC

↑ Previous display ←

3 (Within 7 seconds or so)
Press [I◀◀, REW/∨] or [▶▶I, ∧/FF] to set the time.

4 Press [SHIFT] + [CLOCK/TIMER] to finish setting the time.

The display will return to whatever was displayed before you set the time.

To display the time

Press [SHIFT] + [CLOCK/TIMER] once when the unit is on or at standby mode.

The time is shown for about 5 seconds.

Note

Reset the clock regularly to maintain accuracy.

Timers

Using the play/record timer

Remote control only

You can set the timer to come on at a certain time to wake you up (play timer) or to record a radio station or from the aux source (record timer). The play and record timers cannot be used together.

Preparations:

- Turn the unit on and set the clock (➡ see above).
- **For the play timer**, prepare the desired music source (tape/disc/radio/aux), and set the volume.
- **For the record timer**, check the cassette's erasure prevention tabs (➡ page 11) and insert the tape in deck 2 (➡ page 11). Tune to the radio station (➡ page 10) or select the aux source (➡ page 13).

1 Press [SHIFT] + [CLOCK/TIMER] to select the timer function.

Every time you press the button:

CLOCK → ◴PLAY → ◴REC

↑ Previous display ←

◴PLAY: to set the play timer
◴REC: to set the record timer
(Proceed to the next step within 8 seconds)

Timers

2 ON time setting
① Press [I◀◀, REW/∨] or [▶▶I, ∧/FF] to set the time.
② Press [SHIFT] + [CLOCK/TIMER].

OFF time setting
Repeat steps ① and ②.

3 Press [SHIFT] + [◴PLAY/REC] to display the timer indicator.

Every time you press the button:

◴PLAY → ◴REC

↑ (off) ←

◴PLAY: to turn the play timer on
◴REC: to turn the record timer on
(The indicator doesn't appear if the ON and OFF times or the clock hasn't been set.)

4 Press [⏻] to turn the unit off.

The unit must be off for the timers to operate.

- **Play timer:** Play will start in the set condition at the set time with volume increasing gradually to the set level.
- **Record timer:** The unit comes on 30 seconds before the set time with the volume muted.

To cancel the timer

Press [SHIFT] + [◴PLAY/REC] to clear the timer indicator from the display.

(The timer comes on at the set time everyday if the timer is on.)

To change the settings (when the unit is on)

To change the play/record times

Do steps 1, 2 and 4.

To change the source or volume

1. Press [SHIFT] + [◴PLAY/REC] to clear the timer indicator from the display.
2. Make changes to the source or volume.
3. Do steps 3 to 4.

To check the settings

Press [SHIFT] + [CLOCK/TIMER] while the unit is on to select "◴PLAY" or "◴REC".

The settings are shown in the following order:

Play timer: on time→off time→source→volume

Record timer: on time→off time→source

To check the settings while the unit is off, press [SHIFT] + [CLOCK/TIMER] twice.

If you use the unit after the timers are set

After using, check that the correct tape/disc are loaded before turning the unit off.

Note

- If you turn the unit off and on again while a timer is functioning, the OFF time setting will not be activated.
- If you selected AUX as the source, when the timer comes on, the unit turns on and engages "AUX" as the source. If you want to playback or record from a connected unit, set that unit's timer to the same time. (See the connected unit's instruction manual.)

Using the sleep timer

Remote control only

This timer turns the unit off after a set time.

While enjoying the desired source:

Press [SLEEP] to select the time (minutes).

Every time you press the button:

→ SLEEP 30 → SLEEP 60 → SLEEP 90 → SLEEP 120 → SLEEP OFF →

To cancel the sleep timer

Press [SLEEP] to select "SLEEP OFF".

To confirm the remaining time

Press [SLEEP] once.

The remaining time is shown for about 5 seconds.

To change the setting

Press [SLEEP] to select the new setting.

You can use the sleep timer in combination with the play/record timer. Make sure the unit is off before the play/record timer's start time.

Note

The sleep timer will be turned off when you start recording.

Sound quality/sound field

Using the built-in sound quality/sound field settings

Remote control only

Press [PRESET EQ] to select a setting.
Every time you press the button:

HEAVY → SOFT → CLEAR → DISCO → LIVE → HALL
↑ EQ-OFF (cancelled) ←

HEAVY (sound quality) : Adds punch to rock
SOFT (sound quality) : For background music
CLEAR (sound quality): Clarifies higher sounds
DISCO (sound field) : Produces sound with the same kind of lengthy reverberations heard at a disco
LIVE (sound field) : Makes vocals more alive
HALL (sound field) : Adds an expansiveness to the sound to produce the atmosphere of a great concert hall

Note
You cannot use PRESET EQ together with H.BASS.

Enhancing the bass sound

You can enhance low-frequency sound so that heavy bass sound can be heard clearly, even if the acoustics of your room are not optimal.

Press [H.BASS].
The button light comes on.
Press the button again to cancel.
The button light goes out.

Boosting the subwoofer

Press [SUBWOOFER].
Remote control: Press [SHIFT] + [S.WOOFER].
The button light comes on.

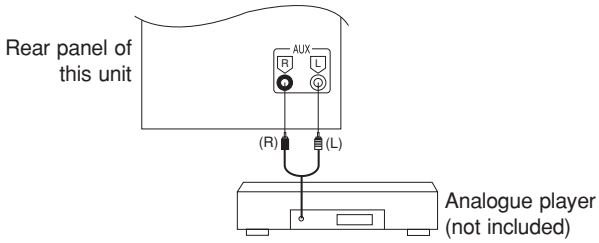
Each time you press the button:
MID (medium) → MAX (high) → Light off (off)
↑ ←

To cancel
Press [SUBWOOFER] to turn the light off.
Remote control: Press [SHIFT] + [S.WOOFER].

Note
You cannot use this function when headphones are connected.

Other functions

External unit connections



- An analogue player with a built-in phono equalizer can be connected.
- For details, refer to the instruction manual of the units which are to be connected.
- When units other than those described above are to be connected, please consult your audio dealer.

Using an external unit

(See above for external unit connection.)

1. Press [AUX].
   The unit comes on.
2. **For listening:** Proceed to step 3.
   For recording: Press [●, REC] (recording starts).
3. Start playback from the external source. (For details, refer to the external unit's instruction manual.)

Using headphones (not included)

Reduce the volume level and connect the headphones.
Plug type: 3.5 mm stereo

Note
Avoid listening for prolonged periods of time to prevent hearing damage.

Auto-off function

Remote control only
When disc or tape is selected as the source
To save power, the unit turns off if it is left unused for ten minutes.
This function does not work if the source is tuner or AUX.

Press [SHIFT] + [AUTO OFF].
"AUTO OFF" is shown on the display.

The setting is maintained even if the unit is turned off.
If you select tuner or AUX as the source, "AUTO OFF" goes out. It comes on again when you select disc or tape.

To cancel
Press [SHIFT] + [AUTO OFF] again.

Convenient functions

To dim the display panel

Remote control only
Press [DIMMER].
The display is dimmed and the indicators are turned off.
(The AC supply indicator remains on.)
Press [DIMMER] again to restore the display.

Switching displays

Press [DISP, –DEMO] to select the desired display mode.
Every time you press the button:

Normal → Peak hold → Reflection
↑ (off) ←

To mute the volume

Remote control only
Press [MUTING].
Press the button again to cancel.
"MUTING" goes out.
To cancel from the unit, turn [VOLUME] to minimum (--dB), then raise it to the required level.
Muting is also cancelled when the unit is turned off.

Troubleshooting guide

Before requesting service, make the checks below. If you can't fix the system as described below, or if something not listed here occurs, refer to the enclosed directory to locate an Authorized Service Center convenient to you or contact your dealer.

Reference pages are shown as black circled numbers ❹.

Common Problems

Although the unit is in standby mode, the display lights up and changes continuously.	Turn off the demo function. ❹ If you set the clock, demo function will be turned off automatically. ⓬
No sound. **Sound stops.**	Turn the volume up. Switch off the unit, determine and correct the cause, then switch the unit on. Causes include shorting of the positive and negative speaker wires, straining of the speakers through excessive volume or power, and using the unit in a hot environment.
Sound is unfixed, reversed or comes from one speaker only.	Check the speaker connections. ❹
Humming heard during play.	An AC mains lead or fluorescent light is near the cables. Keep other appliances and cords away from this unit's cables.
"ERROR" is displayed.	Incorrect operation performed. Read the instructions and try again.
"– –:– –" appears on the display at standby mode.	You plugged the AC mains lead in for the first time or there was a power failure recently. Set the time. ⓬
"F61" is displayed.	Check and correct the speaker cords connection. ❹ If this does not fix the problem, there is a power supply problem. Consult the dealer.

Listening to the radio

Noise is heard. **The stereo indicator flickers or doesn't light.** **Sound is distorted.**	Use an outdoor antenna. ⓫
A beat sound is heard.	Turn the TV off or separate it from the unit.
A low hum is heard during AM broadcasts.	Separate the antenna from other cables and cords.

When there is a television set nearby

The picture on the TV disappears or stripes appear on the screen.	The location and orientation of the antenna are incorrect. If you are using an indoor antenna, change to an outdoor antenna. The TV antenna wire is too close to the unit. Separate the antenna wire of the TV set from the unit.

Using the cassette deck

Poor quality sound.	Clean the heads. ⓯
Recording is not possible.	If the erasure prevention tabs have been removed, cover the holes with adhesive tape. ⓫

Playing discs

The display is wrong or play won't start.	The disc may be upside down. ❻ Wipe the disc. Replace the disc if it is scratched, warped, or non-standard. Condensation may have formed inside the unit due to a sudden change in temperature. Wait for about an hour for it to clear and try again.
Cannot perform all-disc random play.	All-disc random mode cannot be used for MP3 discs. Change the disc or select another play mode. ❼
The total number of tracks displayed differs each time the same disc is inserted. **Unusual sound is heard.**	The disc may be scratched, or its data may be defective. Replace the disc.
CD-RW cannot be read.	The disc was incompletely formatted. Use the recording equipment to fully format the disc before recording.
"VBR–" is displayed instead of the remaining play time.	The unit cannot display the remaining play time for variable bit rate (VBR) tracks.
"TAKE OUT/DISC" appears on the display.	There is a problem with the disc mechanism. (A power failure may have occurred.) The tray will open automatically. Remove the disc from the tray, and after ensuring there is no disc in the tray, close it. The unit will make the disc changing noises for a few moments and then it should operate normally.

Remote control

Remote control doesn't work.	Check that the batteries are inserted correctly. ❸ Replace the batteries if they are worn.

Memory reset (Initialization)

When the following situations occur, refer to the instructions below to reset the memory:

- There is no response when buttons are pressed.
- You want to clear and reset the memory contents.

To reset memory

1 **Disconnect the AC mains lead. (Wait at least 3 minutes before proceeding to step 2.)**
2 **While pressing and holding down [⏻/I] on the main unit, reconnect the AC mains lead.**
"– – – – – – – – –" appears on the display.
3 **Release [⏻/I]**.
All the settings are returned to the factory preset.
You will need to reset the memory items.

Specifications

AMPLIFIER SECTION

RMS output power

THD 10%, both channels driven

1 kHz

(Low channel) 75 W per channel (5 Ω)

10 kHz

(High channel) 70 W per channel (5 Ω)

80 Hz

(Subwoofer channel) 160 W (8 Ω)

Total power output 450 W

For South Africa

PMPO 4000 W

FM/AM TUNER, TERMINALS SECTION

Preset station FM 15 stations
AM 15 stations

Frequency Modulation (FM)

Frequency range

87.50 – 108.00 MHz (50 kHz steps)

For Europe

Sensitivity 1.8 µV (IHF)

S/N 26 dB 1.5 µV

For others

Sensitivity 2.5 µV (IHF)

S/N 26 dB 2.2 µV

Antenna terminal(s) 75 Ω (unbalanced)

Amplitude Modulation (AM)

Frequency range

For Europe, Australia and N.Z.

522 – 1629 kHz (9 kHz steps)

For South Africa

522 – 1629 kHz (9 kHz steps)
520 – 1630 kHz (10 kHz steps)

Sensitivity

S/N 20 dB (at 999 kHz) 560 µV/m

Audio performance (Amplifier)

Input sensitivity/Input impedance

Aux 250 mV, 14.7 kΩ

Phone jack

Terminal Stereo, 3.5 mm jack

CASSETTE DECK SECTION

Track system 4 track, 2 channel

Heads

Record/playback Solid permalloy head

Erasure Double gap ferrite head

Motor DC servo motor

Recording system AC bias 100 kHz

Erasing system AC erase 100 kHz

Tape speed 4.8 cm/s

Overall frequency response (+3 dB, –6 dB at DECK OUT)

NORMAL 35 Hz–14 kHz

S/N Ratio 50 dB (A weighted)

Wow and flutter 0.18% (WRMS)

Fast forward and rewind time

Approx. 120 seconds with C-60 cassette tape

DISC SECTION

Discs played [8 cm or 12 cm]

(1) CD-Audio (CD-DA)
(2) CD-R/RW (CD-DA, MP3 formatted disc)
(3) MP3

Bit rate

MP3 32 kbps–320 kbps

Sampling frequency

MP3 32 kHz, 44.1 kHz, 48 kHz

CD 44.1 kHz

Decoding 16 bit linear

Digital filter 8 fs

D/A converter MASH (1 bit DAC)

Pickup

Wavelength 780 nm

Beam Source (For Norge) Semiconductor laser

Bølgelengde 780 nm

Laserstyrke Ingen farlig stråling sendes ut

Audio output (Disc)

Number of channels

2 (Stereo) (FL, FR)

SPEAKER SECTION

Front speakers SB-AK630

Type

3 way, 3 speaker system (Bass reflex)

Impedance

HIGH 5 Ω

LOW 5 Ω

Speaker(s)

Woofer 16 cm cone type

Tweeter 6 cm cone type

Super tweeter Piezo type

Input power (IEC)

HIGH 70 W (Max)

LOW 75 W (Max)

Output sound pressure level

83 dB/W (1.0 m)

Cross over frequency 2.6 kHz, 10 kHz

Frequency range 37 Hz–23 kHz (–16 dB)
44 Hz–22 kHz (–10 dB)

Dimensions (WxHxD) 240 x 330 x 229 mm

Mass 3.2 kg

Subwoofer SB-WAK630

Type

1 way, 1 speaker system (Bass reflex)

Impedance 8 Ω

Speaker(s)

Subwoofer 16 cm cone type

Input power (IEC) 160 W (Max)

Output sound pressure level

80 dB/W (1.0 m)

Frequency range 40 Hz–220 Hz (–16 dB)
45 Hz–180 Hz (–10 dB)

Dimensions (WxHxD) 240 x 330 x 267 mm

Mass 3.4 kg

GENERAL

Power supply

For Continental Europe

AC 230 V, 50 Hz

For the United Kingdom, Australia and N.Z.

AC 230-240 V, 50 Hz

For South Africa

AC 220–240 V, 50/60 Hz

Power consumption 260 W

Dimensions (WxHxD) 250 x 330 x 341 mm

Mass 7.1 kg

Operating temperature range

+5°C to +35 °C

Operating humidity range

5% to 90 % RH (no condensation)

Power consumption in standby mode: 0.7 W

Note:

1. Specifications are subject to change without notice.
   Mass and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.
3. The labels “HIGH” and “LOW” on the rear of the speakers refer to High frequency and Low frequency.

Maintenance

If the surfaces are dirty

To clean this unit, wipe with a soft, dry cloth.

- Never use alcohol, paint thinner or benzine to clean this unit.
- Before using a chemically treated cloth, read the instructions that came with the cloth carefully.

For a cleaner, crisper sound

Clean the heads regularly to assure good quality playback and recording.
Use a cleaning tape (not included).

CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

CAUTION!

- **DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT-IN CABINET OR IN ANOTHER CONFINED SPACE. ENSURE THE UNIT IS WELL VENTILATED. TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING, ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION VENTS.**
- **DO NOT OBSTRUCT THE UNIT'S VENTILATION OPENINGS WITH NEWSPAPERS, TABLECLOTHS, CURTAINS, AND SIMILAR ITEMS.**
- **DO NOT PLACE SOURCES OF NAKED FLAMES, SUCH AS LIGHTED CANDLES, ON THE UNIT.**
- **DISPOSE OF BATTERIES IN AN ENVIRONMENTALLY FRIENDLY MANNER.**

WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE, DO NOT EXPOSE THIS APPARATUS TO RAIN, MOISTURE, DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.

This product may receive radio interference caused by mobile telephones during use. If such interference is apparent, please increase separation between the product and the mobile telephone.

The socket outlet shall be installed near the equipment and easily accessible or the mains plug or an appliance coupler shall remain readily operable.

For South Africa

THIS UNIT IS INTENDED FOR USE IN TROPICAL CLIMATES.

For others

THIS UNIT IS INTENDED FOR USE IN MODERATE CLIMATES.

TÄMÄ LAITE ON TARKOITETTU KÄYTETTÄVÄKSI LEUDOSSA ILMASTOSSA.

DETTE APPARATET ER BEREGNET TIL BRUK UNDER MODERATE KLIMAFORHOLD.

SUOMI

VAROITUS!

LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTAA ALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

VAROITUS!

- **ÄLÄ ASENNA TAI LAITA TÄTÄ LAITETTA KABINETTITYYPPISEEN KIRJAKAAPPIIN TAI MUUHUN SULJETTUUN TILAAN, JOTTA TUULETUS ONNISTUISI. VARMISTA, ETTÄ VERHO TAI MIKÄÄN MUU MATERIAALI EI HUONONNA TUULETUSTA, JOTTA VÄLTETTÄISIIN YLIKUUMENEMISESTA JOHTUVA SÄHKÖISKU- TAI TULIPALOVAARA.**
- **ÄLÄ PEITÄ LAITTEEN TUULETUSAUKKOJA SANOMALEHDELLÄ, PÖYTÄLIINALLA, VERHOLLA TAI MUULLA VASTAAVALLA ESINEELLÄ.**
- **ÄLÄ ASETA PALAVAA KYNTTILÄÄ TAI MUUTA AVOTULEN LÄHDETTÄ LAITTEEN PÄÄLLE.**
- **HÄVITÄ PARISTOT LUONTOA VAHINGOITTAMATTOMALLA TAVALLA.**

VAROITUS:

TULIPALO-, SÄHKÖISKUVAARAN TAI TUOTETTA KOHTAAVAN MUUN VAHINGON VÄHENTÄMISEKSI EI LAITETTA SAA ALTISTAA SATEELLE, KOSTEUDELLE, VESIPISAROILLE TAI ROISKEELLE, EIKÄ NESTETTÄ SISÄLTÄVIÄ ESINEITÄ, KUTEN ESIMERKIKSI MALJAKOITA, SAA ASETTAA LAITTEEN PÄÄLLE.

Laite tulee asettaa lähelle verkkopistorasiaa ja pistokkeen täytyy olla sellaisessa asennossa, että siihen on helppo tarttua ongelman sattuessa.

NORSK

ADVARSEL!

DETTE PRODUKTET ANVENDER EN LASER.
BETJENING AV KONTROLLER, JUSTERINGER ELLER ANDRE INNGREP ENN DE SOM ER BESKREVET I DENNE BRUKSANVISNING, KAN FØRE TIL FARLIG BESTRÅLING.
DEKSLER MÅ IKKE ÅPNES, OG FORSØK ALDRI Å REPARERE APPARATET PÅ EGENHÅND. ALT SERVICE OG REPARASJONSARBEID MÅ UTFØRES AV KVALIFISERT PERSONELL.

ADVARSEL!

- **APPARATET MÅ IKKE PLASSERES I EN BOKHYLLE, ET INNEBYGGET KABINETT ELLER ET ANNET LUKKET STED HVOR VENTILASJONSFORHOLDENE ER UTILSTREKKELIGE. SØRG FOR AT GARDINER ELLER LIGNENDE IKKE FORVERRER VENTILASJONSFORHOLDENE, SÅ RISIKO FOR ELEKTRISK SJOKK ELLER BRANN FORÅRSAKET AV OVERHETING UNNGÅS.**
- **APPARATETS VENTILASJONSÅPNINGER MÅ IKKE DEKKES TIL MED AVISER, BORDDUKER, GARDINER OG LIGNENDE.**
- **PLASSER IKKE ÅPEN ILD, SLIK SOM LEVENDE LYS, OPPÅ APPARATET.**
- **BRUKTE BATTERIER MÅ KASSERES UTEN FARE FOR MILJØET.**

ADVARSEL:

FOR Å REDUSERE FAREN FOR BRANN, ELEKTRISK STØT ELLER SKADER PÅ PRODUKTET, MÅ DETTE APPARATET IKKE UTSETTES FOR REGN, FUKTIGHET, VANNDRÅPER ELLER VANNSPRUT. DET MÅ HELLER IKKE PLASSERES GJENSTANDER FYLT MED VANN, SLIK SOM BLOMSTERVASER, OPPÅ APPARATET.

Utstyret bør plasseres i nærheten av AC-stikkontakten, og støpslet må være lett tilgjengelig hvis det skulle oppstå problemer.

Matsushita Electric Industrial Co., Ltd.
Web Site: http://www.panasonic.co.jp/global/

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